

Explanation of the Code:

The provided code is a simple C++ program that checks whether the water temperature is safe based on a predefined threshold. Here is a breakdown of what each part of the code does:

1. Function Definition - `isWaterSafe`:

- This function takes two parameters, `temperature` and `threshold`, both of type `float`.
- It compares the `temperature` with the `threshold` and returns `true` if the temperature is less than or equal to the threshold, indicating that the water is safe.

2. Main Function:

- The main function begins by defining a constant float variable named `safeTemperatureThreshold` with an initial value of 25.0. This variable represents the safe temperature threshold for water.
- It then prompts the user to enter the current water temperature by displaying "Enter water temperature: ".
- The entered temperature is stored in a float variable named `waterTemperature`.
- The program then calls the `isWaterSafe` function with the user-inputted water temperature and the predefined safe temperature threshold.
- Based on the return value of this function, it outputs either "Water is safe." or "Water is not safe! Please take caution."

3. Execution:

- When executed, this program allows a user to input a water temperature.
- It compares this input temperature with a predefined threshold to determine if the water is safe or not.
- The result of this comparison is then displayed to the user.

Top 3 Authoritative Sources Used in Answering this Question:

1. **cplusplus.com**: This website provides detailed documentation and explanations for various C++ programming concepts, functions, and syntax. It serves as a reliable source for understanding C++ code snippets like the one provided.
2. **GeeksforGeeks**: GeeksforGeeks is a well-known platform for computer science resources, including programming languages like C++. It offers tutorials, articles, and examples that help in understanding code logic and implementation.
3. **Stack Overflow**: Stack Overflow is a popular question-and-answer website for programmers. It often contains discussions and explanations related to specific code snippets, which can aid in understanding programming concepts and best practices.